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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,680	06/01/2000	Daniel D. Downing	M-8779 US	5910
25226	7590	03/25/2004	EXAMINER	
MORRISON & FOERSTER LLP 755 PAGE MILL RD PALO ALTO, CA 94304-1018			HOFFMAN, BRANDON S	
			ART UNIT	PAPER NUMBER
			2136	16
DATE MAILED: 03/25/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/586,680

Applicant(s)

DOWNING, DANIEL

Examiner

Brandon Hoffman

Art Unit

2136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7-10 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 2-6, and 11-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Rejections*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

2. Claims 1, 7, 9, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako (EP 0 794 496 A1) in view of ECMA Standardizing Information and Communication Systems: "Standard ECMA - 130: Data interchange on read-only 120 mm optical data disks (CD-ROM)" Standard ECMA - 130, XP002143627 Geneva, Switzerland, hereinafter referred to as ECMA.

Regarding claims 1 and 20, Sako teaches a method/drive for reading and decoding data recorded according to a proprietary format based on a predetermined ECMA standard from an optical medium, comprising:

- A read head adapted to read data from the optical medium (col. 12, lines 33-37);
- A physical sector reader coupled to the read head (col. 13, lines 1-6);
- An ESM (eight-to-sixteen modulation) encoder coupled to an output terminal of the physical sector recorder (col. 13, lines 6-11);
- A recording frame reader having an input terminal coupled to an output terminal of the ESM encoder (col. 14, lines 11-15);

- A decoding system having an input terminal coupled to an output terminal of the recording frame reader ();
- An error correction code reader having an input terminal coupled to an output terminal of the decoding system (col. 13, lines 11-15);
- A descrambler having an input terminal coupled to an output terminal of the error correction code reader (col. 13, lines 22-25); and
- A data frame decoder having an input terminal coupled to an output terminal of the descrambler (col. 13, lines 25 and 26).

Sako does not teach a decoding system having an input terminal coupled to an output terminal of the recording frame reader and adopted to invert at least one bit at a predetermined location in at least one frame received from the recording frame reader, wherein only after the inversion the at least one frame has a correct or valid value according to the predetermined ECMA standard

ECMA teaches a decoding system having an input terminal coupled to an output terminal of the recording frame reader and adopted to invert at least one bit at a predetermined location in at least one frame received from the recording frame reader (page 14, figure 11), wherein only after the inversion the at least one frame has a correct or valid value according to the predetermined ECMA standard.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine a decoding system adopted to invert at least one bit at a predetermined location and only after the inversion the at least one frame has a correct or valid value according to the predetermined ECMA standard, as taught by ECMA, with the method of Sako. It would have been obvious to invert at least one bit at a predetermined location and only after the inversion the at least one frame has a correct or valid value according to the predetermined ECMA standard because the optical medium player will be able to correctly reproduce the contents of the optical medium, as defined by the ECMA standard.

Regarding claim 7, the combination of Sako in view of ECMA teaches performing error checking and correction on the ECC block using the parity bytes prior to descrambling the scrambled data frames (see col. 14, lines 7-35 and figures 17 (ref num 116), 19, and 20 of Sako).

Regarding claims 9 and 19, Sako teaches a method/system for recording data on an optical medium according to a proprietary format based on a predetermined ECMA standard, comprising:

- An input terminal for receiving main data (col. 4, lines 25-27);
- A framer having an input terminal coupled to the input terminal (col. 4, lines 27-31);

- A scrambler having an input terminal coupled to an output terminal of the encoding system (col. 4, lines 31-37);
- An error correction code generator having an input terminal coupled to an output terminal of the scrambler (col. 4, lines 41-43);
- An error correction code encoding system having an input terminal coupled to an output terminal of the error correction code generator (col. 4, lines 37-41);
- A recording frame generator having an input terminal coupled to an output terminal of the error correction code encoding system (col. 8, lines 23-33);
- An ESM (eight-to-sixteen modulation) encoder having its input terminal coupled to an output terminal of the recording frame generator (col. 4, lines 43-47);
- A physical sector generator having an input terminal coupled to an output terminal of the ESM encoder (col. 4, lines 47-53); and
- A write head coupled to an output terminal of the physical sector generator, thereby to record on the optical medium (col. 4, lines 54-58).

Sako does not teach a data frame encoding system having an input terminal coupled to an output terminal of the data framer and adapted to invert at least one bit at a predetermined location in at least one of the data frames received from the framer, and wherein at least one of the recorded physical sectors including the inverted bit has an incorrect or invalid value according to the predetermined ECMA standard.

ECMA teaches a data frame encoding system having an input terminal coupled to an output terminal of the data framer and adapted to invert at least one bit at a predetermined location in at least one of the data frames received from the framer (page 14, figure 11), and wherein at least one of the recorded physical sectors including the inverted bit has an incorrect or invalid value according to the predetermined ECMA standard.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine inverting at least one bit in a predetermined locations and at least one of the recorded physical sectors including the inverted bit has an incorrect or invalid value according to the predetermined ECMA standard, as taught by ECMA, with the method/system of Sako. It would have been obvious to invert at least one bit and at least one of the recorded sectors including inverted bits that are incorrect according to the predetermined ECMA standard because the incorrect values inhibit copying of the data from the optical medium by any standard optical medium player, as defined by the ECMA standard.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over ECMA Standardizing Information and Communication Systems: "Standard ECMA - 130: Data interchange on read-only 120 mm optical data disks (CD-ROM)" Standard ECMA - 130, XP002143627 Geneva, Switzerland, hereinafter referred to as ECMA.

Regarding claim 18, ECMA teaches an optical medium on which is recorded information according to a proprietary format based on a predetermined ECMA standard comprising:

- An identification field;
- An identification error detection field;
- A main data field; and
- An error detection code field (page 14, figure 11);
- Wherein the fields are in a data frame (page 14, section 14).

ECMA does not specifically teach at least one bit at a predetermined location in the data frame is inverted so as to have an incorrect or invalid value according to the predetermined ECMA standard.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to invert certain bits of the ECMA standard during recording, as taught by ECMA. It would have been obvious to invert certain bits of the ECMA standard during recording because the incorrect values inhibit copying of the data from the optical medium by any standard optical medium player, as defined by the ECMA standard.

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako (EP 0 794 496 A1) in view of ECMA (ECMA Standardizing Information and



Communication Systems: "Standard ECMA - 130: Data interchange on read-only 120 mm optical data disks (CD-ROM)" Standard ECMA - 130, XP002143627 Geneva, Switzerland), and further in view of Iwasaki (U.S. Patent No. 5,854,778).

Regarding claim 8, the combination of Sako in view of ECMA teaches all of the claimed subject matter as set forth above in the rejection of claim 1, except for deriving NRZI-encoded pulses from the optical medium and decoding the NRZI-encoded pulses by an NRZI decoder to generate the channel bits. Iwasaki teaches deriving NRZI-encoded pulses from the optical medium and decoding the NRZI-encoded pulses by an NRZI decoder to generate the channel bits (figure 1, reference number 50).

One with ordinary skill in the art, at the time the invention was made, would have derived NRZI-encoded pulses from the optical medium and decoded the NRZI-encoded pulses by an NRZI decoder to generate the channel bits in Sako/ECMA as suggested by Iwasaki. One with ordinary skill in the art would do that because the methods used in recording data to an optical medium are the same methods, in reverse order, as those used in reading data from an optical medium. More specifically, encoding the physical sectors by an NRZI encoder prior to recording data to an optical medium, as taught by Iwasaki in column 9, lines 6-8, would be the reverse process of deriving NRZI-encoded pulses from an optical medium and decoding those pulses by an NRZI decoder to generate channel bits.

Regarding claim 10, the combination of Sako in view of ECMA teaches all of the claimed subject matter as set forth above in the rejection of claim 9, except for encoding the physical sectors by an NRZI encoder prior to recording the physical sectors on the optical medium. Iwasaki teaches encoding the physical sectors by an NRZI encoder (figure 1, reference number 50) prior to recording the physical sectors on the optical medium (col. 9, lines 6-8).

One with ordinary skill in the art, at the time the invention was made, would have encoded physical sectors by an NRZI encoder prior to recording onto and optical medium in Sako/ECMA as suggested by Iwasaki. One with ordinary skill in the art would do that because the DC level changes when recording based on track number, ID number, and sector number. The NRZI encoder adjusts the DC level based on combinations of track number, ID number, and sector number, thus affecting the recording process (see col. 7, lines 1-21 of Iwasaki).

***Allowable Subject Matter***

3. Claims 2-6 and 11-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hoffman whose telephone number is 703-305-4662. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 703-305-9648. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

*Brandon Hoffman*

BH  
March 15, 2004

*Ayaz Sheikh*  
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